

## CLAIMS:

1. A device for generating X-rays, which device comprises a source for emitting electrons accommodated in a vacuum space, a liquid metal for emitting X-rays as a result of the incidence of electrons, and a pumping means for causing a flow of the liquid metal through a constriction where the electrons emitted by the source impinge upon the liquid metal, said constriction being bounded by a window, which is transparent to electrons and X-rays and separates the constriction from the vacuum space, characterized in that the constriction has a cross-sectional area which, seen in a flow direction, increases in such a manner that during operation in said direction, a decrease of a flow velocity takes place such that a decrease of a pressure of the liquid metal in the constriction, caused by viscous flow losses, substantially corresponds with an increase of said pressure caused by said decrease of the velocity.  
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2. A device for generating X-rays as claimed in claim 1, characterized in that opposite to the window the constriction is bounded by a wall which tapers relative to the window, seen in an upstream direction opposite to the flow direction.  
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3. A device for generating X-rays as claimed in claim 2, characterized in that said wall is deformable by means of at least one actuator, the device comprising at least one pressure sensor for measuring the pressure of the liquid metal in the constriction and a control member for controlling the actuator as a function of a pressure measured by means of  
20 the sensor.
4. A device as claimed in claim 3, characterized in that said actuator is a piezo-electric actuator.